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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/585,243	05/31/2000	Takao Yamamoto	39303.2014800	4247
25224	7590	07/13/2004	EXAMINER	
MORRISON & FOERSTER, LLP 555 WEST FIFTH STREET SUITE 3500 LOS ANGELES, CA 90013-1024			WARREN, DAVID S	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No. 09/585,243	Applicant(s) YAMAMOTO, TAKAO	
	Examiner David S. Warren	Art Unit 2837	

**-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-20, 23, 24, 27 and 28 is/are allowed.
- 6) ☒ Claim(s) 1-14, 21, 22, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 May 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some    c) ☐ None of:
    - 1. ☒ Certified copies of the priority documents have been received.
    - 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 - 14, 21, 22, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eitaki et al. (5,278,348) in view of Mikisuke (JP 10319953).

Regarding claims 1, 4, 5, 9, and 21, 22, 25, 26, Eitaki discloses an extension board (ROM card 12) for storing patterns (i.e., sequences) and a reproducing device for reproducing musical tone signals (col. 5, lines 36 – 40). The read out device (I/O interface of claim 4) is inherent, since all data stored in ROM 12 must be read out. The “extended music element” is considered to be the additional waveform data (e.g., tone color or timbre) stored in ROM 12. In other words, if the tone generator is capable of producing tone colors of, say, flute and guitar, any additional tones of say, organ and piano are considered to be an extension of the original tone generator. The setting device is shown by Eitaki as element 30 (fig. 2), which sets info as well as “sends” data to extension board 12. Eitaki states that data is taken from both ROM 9 and ROM card 12, therefore, the “tone generator is independently incapable of generating musical tone signals having the extended music element.” As defined supra, any additional waveform data on card 12 will yield a situation wherein the “tone generator is

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independently incapable of generating musical tone signals having the extended music element.” The second synthesizer is the waveform data located on extension board ROM 12. “[A]ctivating a first music synthesizer of the musical tone generation device” is shown by Eitaki’s elements 1 and 2 (fig. 1). “[I]nitiating the setup for the reproduction of the musical tone signals” is shown by Eitaki as the manual operation of element 26 (or 34). Regarding claims 2 and 10, waveform data inherently contains “tone color” (see col. 6, line 6 – tone color is synonymous with timbre). Since Eitaki provides an editing means for extension board 12 data, this would allow the data thereon to be “different” than that of the synthesizer section (once the data was edited). Regarding claims 3, 11, and 13, Eitaki teaches that extension board contains arpeggio data (col. 5, line 24). Regarding claims 6, 7, and 12, Eitaki teaches “various kinds of waveform data” are stored in ROM (i.e., a plurality of tones and arpeggios are “secured”). The term “secures” in claims 12 and 13 is interpreted to mean “addressable” and “readable” from ROM. Regarding claim 14, by definition “arpeggios” are time-shifted note patterns outlining a chord (i.e., each note of the chord is time-shifted so that each note is sounded at a different time. In the Eitaki teachings, automatic arpeggios are performed by playing a single note – hence, other notes are shifted in time from the original to complete the arpeggio. Regarding claim 8, Eitaki shows that “power on” initiates a sequence performance process (step 05 of fig. 7). Since Eitaki states that all functions (sequences, waveform data, arpeggios) of ROM 10 can be performed by extension board 12, figure 7 of Eitaki is considered to operate in accordance with ROM 12 (and therefore meets applicant’s claim 8). Eitaki does not disclose the use of an extension

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board for an electronic musical instrument having a CPU. The document to Mikisuke discloses a CPU located in plug-in boards 191 – 199 (see fig. on front of English translation of Abstract) used in a musical sound synthesizer. It would have been obvious to one of ordinary skill in the art to combine the teachings of Eitaki and Mikisuke to obtain an extension board comprising a central processing unit (CPU). The motivation for making this combination is that a secondary CPU eases processing resources on a main or primary CPU making music and/or audio processing more efficient (e.g., with less latency).

***Allowable Subject Matter***

Claims 15 - 20, 23, 24, 27, and 28 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art does not disclose the use of an extension board for mixing and *expanding* tones (or tone colors or patterns) with those of a tone generator (or synthesizer). In contrast, prior art extension boards provide a separate and distinct (i.e., additional) set of tone colors. The current invention refers to adding (or expanding) color to already existing tones.

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### ***Response to Arguments***

Applicant's arguments with respect to claims 1 - 14, 21, 22, 25, and 26 have been considered but are moot in view of the new ground(s) of rejection.

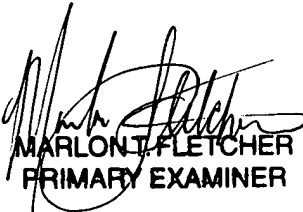
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Warren whose telephone number is 571-272-2076. The examiner can normally be reached on M-F, 9:30 A.M. to 6:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2800 ext 37. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dsw

  
MARLON T. FLETCHER  
PRIMARY EXAMINER